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ABSTRACT

The decline in the number of marginal constituencies in Britain is often attributed to the increasing geographical polarisation of the electorate, with the North having become even more pro-Labour and the South even more pro-Conservative. We show that this has been more than neutralised by the weakening links between social class and voting behaviour, and explain the fall in the number of marginals by the party, not just personal, incumbency effects which tend to pile up in all but the most marginal seats.

The fact that Britain has fewer marginal constituencies than it used to is widely known. Curtice and Steed (1984, 1988) are among those who find a sudden drop in the number of marginals after 1979, noting that this is reflected in an increase in the standard deviation of Conservative/Labour shares across the constituencies, partly caused by a negative kurtosis flattening the peak of the distribution away from normality. Norris and Crewe (1994) agreed with the repeated demonstrations by Curtice and Steed that there were now fewer two-party marginals -- seats where the Conservatives polled between 45 and 55% of the combined Conservative / Labour vote – but argued that, if the point of identifying a marginal seat was to pick out those seats most liable to change hands, then a better criterion would be the number of seats won by either Conservative or Labour where the margin between the winner and the runner-up (of whatever party) was less than 10% of all the votes cast. In the current article we shall use the Norris/Crewe classification of a marginal, though for slightly different reasons to theirs. But table 1 below shows that, even on this classification, extending the data

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to 2005 restores a long-run downward trend to the number of marginals, though at nothing like the rate given by the Curtice/Steed criterion.

TABLE 1

	2-party vote percent of seats with maj. <10%	total vote percent of seats with maj. <10%	total vote percent of seats with maj. <20%	total vote standard deviation	total vote kurtosis
1950	27.9	31.3	56.4	15.1	1.55
1951	29.1	30.6	55.5	15.2	0.39
1955	27.9	28.5	53.4	15.0	-0.01
1959	28.0	30.0	52.9	14.4	-0.09
1964	27.0	31.2	58.8	14.3	0.87
1966	28.6	31.2	57.2	16.0	0.59
1970	25.3	27.9	56.6	13.8	0.13
1974 (Feb)	19.3	27.0	65.1	12.1	1.21
1974 (Oct)	18.3	28.6	59.5	13.9	0.88
1979	17.2	22.6	48.0	13.5	-0.14
1983	15.2	23.0	47.9	11.1	-0.53
1987	14.1	21.3	46.1	13.8	-0.06
1992	17.5	24.9	46.4	13.9	-0.09
1997	13.2	22.1	45.4	17.3	-0.57
2001	10.0	17.4	45.2	14.4	-0.33
2005	15.8	24.7	52.9	12.4	-0.03

The main reason put forward over the years for the decline in the number of marginals has been geographical. If Southern seats become more intensively Conservative while Northern ones swing still further towards Labour, this will turn Conservative southern and Labour northern marginals into safer seats. It will have the opposite effect on safe Conservative seats in the north and safe Labour seats in the south, but, because there were relatively few of these, not all the vanishing marginals will be replaced.

That polarization between North and South has occurred can be seen from the first column in table 2. Regional polarisation here is measured as follows:

[% of seats in South that are more Conservative than national average *minus* % of seats in South that are more Labour than national, average] + [% of seats in North that are more Labour than national average *minus* % of seats in North that are more Conservative than national average]

where South includes the South-Eastern and South-Western regions of England as currently defined by the British government, plus any other county which adjoins London. North comprises Scotland, plus the North-East and North-West regions, and Yorkshire and Humberside, as defined by the government.

TABLE 2

Year	Regional Polarisation Lab/Con 1st	Consistency index
1950	8.04	n/a
1951	8.20	n/a
1955	8.88	n/a
1959	12.97	n/a
1964	14.37	76
1966	15.00	83
1970	15.92	78
1974 (Feb.)	16.04	50
1974 (Oct.)	17.83	51
1979	26.09	42
1983	31.14	45
1987	40.52	43
1992	36.02	46
1997	30.56	36
2001	29.20	37
2005	31.00	n/a

The high point of polarization was reached in the general election of 1987, when Labour won only three seats south of a line from the Wash to the Bristol Channel (London excepted) and the Conservatives, despite a twelve-point national lead in the vote, only won ten out of a possible seventy-two seats north of Hadrian's wall. Since then polarization has been partially reversed, but even so the index for 2005 was nearly twice anything seen before 1979.

However as geographical political identities have become more polarized, class ones have become less so. A simple index of the decoupling of class and voting is the consistency index shown in column 2 of table 1(taken from Clarke et. al., 2003, p.43):

[% of middle-class voters who vote Conservative *minus* % of working class voters who vote Conservative] *plus* [% of working-class voters who vote Labour *minus* % of middle-class voters who vote Labour]

Clearly the maximum score – absolute correlation between class and party – is 200. The index has always taken on a value well below half of this, but nonetheless declined from 76 in 1964 to 37 in 2001.

Because the two indices are comparable (they use the same method to measure, respectively, the correlation between being Southern and Conservative and the correlation between being middle-class and Conservative) we can take the much larger absolute change in the consistency index than in the regional one to mean that class has weakened as a voting indicator more rapidly than region has strengthened. If regional polarization had been the only effect at work, we would indeed have an explanation for the falling number of marginals. The trouble is that all the while there has been an even stronger opposing effect – the continuing detachment of voting from social class. And even if social de-polarisation had been no stronger than regional polarization, the net effect of the two forces would still have been to *increase* the number of marginals.

2. Model

Suppose constituencies are uniformly distributed along two axes, the *x*-axis (-1 to +1) measuring their class composition (where -1 is all working-class and +1 is all middle-class), and the *y*-axis measuring their geographical location (where -1 is furthest south and +1 is furthest north.) Let there be 2 parties *L* and *R* where *m, R*'s majority over *L,* is given by

$m=kx-y$ (we measure *m* in whatever units eliminates a coefficient on y). (1)

Now suppose that the influence of class on voting diminishes, while the influence of region on voting increases to an equal extent. The new equation for *R's* (positive or negative) majority is thus:

$m' = (k-c)x - (1+c)y.$ (2)

Thus where $m'>m$, a seat held by R becomes safer. Where $m'<-m$, a seat held by R changes hands, and becomes safer for *L* than it previously was for *R*. All other seats become more marginal.

From (1) and (2), the condition for $m' > m$ is that $-c(x+y)>0$, i.e. $y<-x$. And the condition for $m'<-m$ will be $(2k-c)x - (2+c)y <0$. i.e. $y > \left(\frac{2k-c}{2+c}\right)x$.

We now assume that not only does *k* exceed unity (to begin with, class matters more than geography in determining how people vote) but that *k-c > 1+c*, i.e. even after class has declined and geography increased in importance, class is still the more powerful factor of the two (as shown for Britain in Table 2). Then the electoral map (taking, initially, just those seats originally held by *R*) looks as follows:

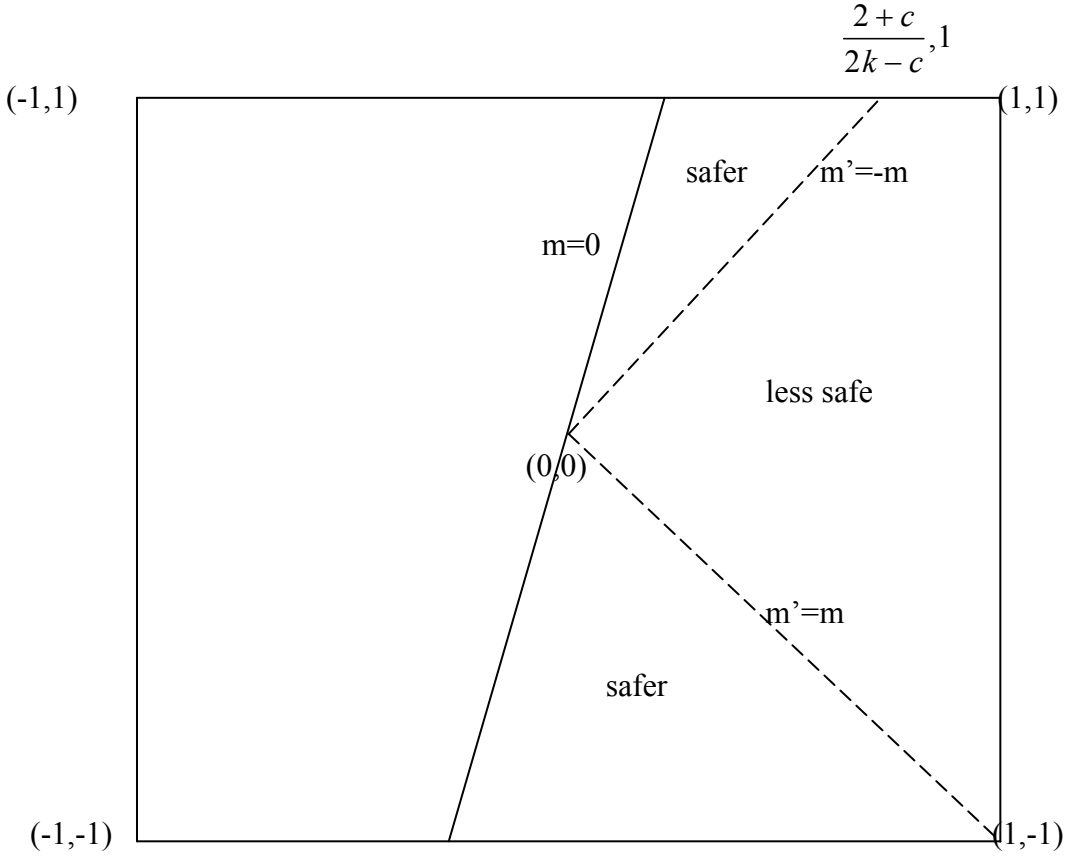

Fig.1

Note that the *m'=-m* line must cut the *y=1* line at *x<1*. If *k-c > 1+c,* then

$$y = \left(\frac{2k-c}{2+c}\right)x \Rightarrow y > x.$$

By symmetry, the whole map, including seats originally held by party *L,* must look like this:

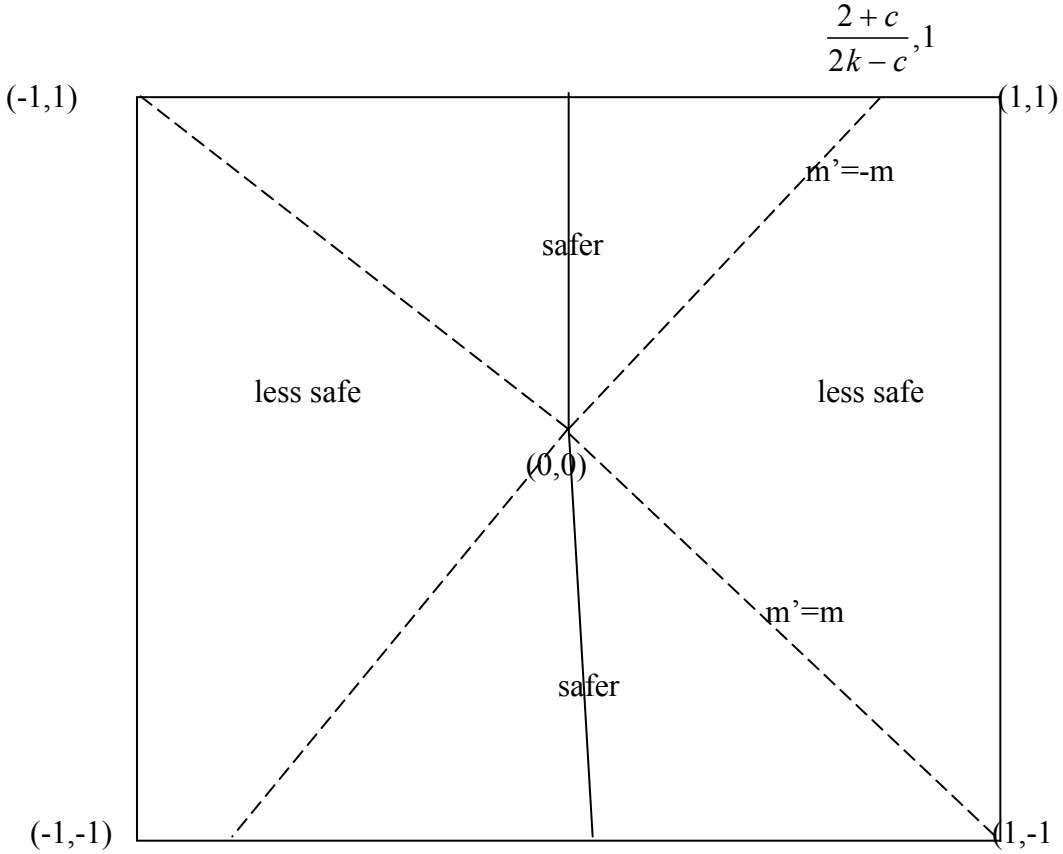

Fig.2

Taking, then, the right-hand half of the map (seats where *x>0*), the area of seats that get safer (whether or not they change hands) is $\left(\frac{2+c}{4k-2c}\right)+\frac{1}{2}$. Since the area of the right-hand half of the map is 2, it follows that a majority of seats will become more marginal iff $\left(\frac{2+c}{4k-2c}\right)+\frac{1}{2}<1$ i.e. $\left(\frac{2+c}{4k-2c}\right)<\frac{1}{2}$. But this reduces to *k-c > 1+c,* our original assumption. It therefore follows that, even if class de-polarisation is no stronger than

regional polarisation, the end result will be more, not fewer, marginals, provided class still counts for more than region at the end of the day.

We thus need another explanation of why the number of marginals in Britain has declined. One possibility is that the incumbent party in a seat gradually builds up an incumbency effect, and we approach this by looking, initially, at how governing parties have typically fared in their own and in opposition-held seats.

3. Data

We make use of all constituency results (Northern Ireland excepted) between 1950 and 2005, where either Labour or the Conservatives won the seat. However the elections of February 1974, 1983 and 1997, all of which followed major boundary changes, are used only to calculate swings at the succeeding election (and to establish where it was being contested by incumbent MP's).

4. Results

In table 3, column 1, we regress the swing to the government of the day on the absolute percentage majority for the local winner in each seat, the percentage of the vote which went to neither the Labour nor the Conservative candidate, and the 'incumbency score', a discrete variable which reflects the incumbency status of the winning candidate (see Appendix for a fuller definition and justification.) Fixed effects are included for each election in our data set.

TABLE 3

	(1) Swing to govt.	(2) Swing to govt.
Majority	-0.0095*** (0.000)	--
Lagged swing	--	--
Opposition Majority	--	0.0267*** (0.000)
Government majority	--	-0.0307*** (0.000)
Government seat	--	0.9812*** (0.000)
Third party	-0.1424** (0.013)	-0.1284** (0.024)
Incumbency score	0.6926*** (0.000)	0.6940*** (0.000)
1951	-0.938	-1.506
1955	1.680	0.990
1959	1.255	0.605
1964	-3.439	-4.088
1966	3.271	2.718
1970	-4.345	-4.817
1974 (Oct)	2.458	1.908
1979	-4.225	-4.715
1987	-2.223	--2.904
1992	-2.701	-3.390
2001	-1.048	-1.480
2005	-3.035	-3.582
Adj R^2	0.536	0.544
No. of obs.	5887	5887

Column (1) of table 3 indicates that governments on average fare best (in terms of swing) in marginal seats. But column (2) which differentiates between government- and opposition-held seats, sheds a different light on the whole picture. Our finding is the pattern is in Fig.3

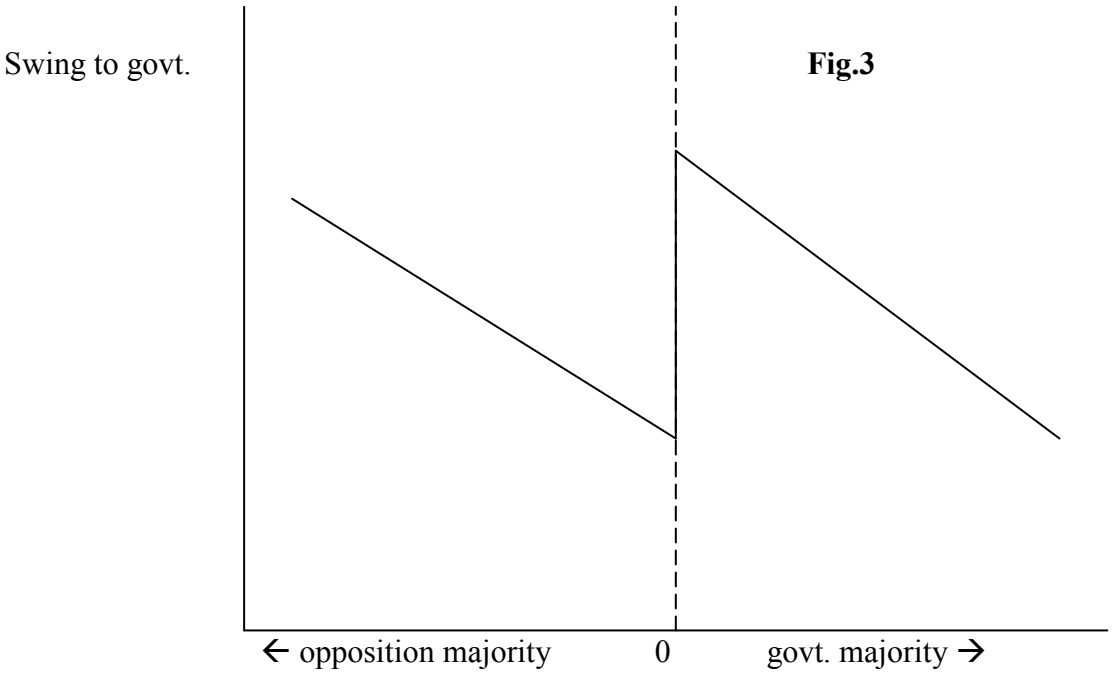

Fig.3

i.e.

(1) Parties do better in their own marginal seats than in those held by their opponents

(2) Subject to this exception, the swing in favour of a parry is inverse to its existing share of the vote in that constituency. You lose the most where you have been doing best.

We now search for explanations for each of these phenomena separately -- starting with the second one -- before putting them back together to see what they portend about the long-term fates of marginal and safe seats respectively.

4.1 Swing is inverse to existing share of the vote

If we take this effect by itself, it seems to predict that there is some kind of long-term entropy going on, and that a long enough wait would turn every safe seat into a marginal. However, as will shortly be seen, any such trend will be checked, if not reversed, when we combine it with parties' tendency to better in their own marginals. And quite apart from this, a tendency for large majorities to get smaller may not be entropy at all. Another possibility is that constituencies suffer shocks but then revert to their own particular mean. In this case, a low vote at the last election and a favourable swing at this one would be correlated because both would result from an unfavourable shock at the last election.

We might call these competing explanations of our results the 'entropy' explanation and the 'mean-reversion' explanation. We can distinguish between them empirically by regressing constituency swings on both majorities and swings at the previous election. The entropy theory implies that the coefficient on the former will remain significant and negative; the mean reversion theory says it will lose its significance, transferring it to the previously omitted variable of lagged swing.

Column (1) of table 4 suggests that there is some truth in both hypotheses. A 1% constituency-specific swing at the previous election will, on average lead to a 0.15% swing back at the current election (the year dummies are still in the regression but have not been reported). Some weak mean-reversion is taking place. But controlling for this effect does not destroy the significance of the coefficients on government majority and opposition majority. The entropy hypothesis has survived the challenge.

TABLE 4

	Swing to govt.	Swing to govt.
Opposition majority	0.0283*** (0.000)	0.0329*** (0.000)
Government majority	-0.0289*** (0.000)	-0.0339*** (0.000)
Government seat	0.931*** (0.000)	1.009*** (0.000)
First-timer	---	0.081 (0.726)
Third party	-0.0118* (0.069)	-0.0095 (0.150)
Incumbency score	0.8731*** (0.000)	0.8271*** (0.000)
Lagged swing	-0.1549*** (0.000)	---
Adj R^2	0.650	0.623
No. of obs.	3688	3754

One extremely salient fact that we would expect to produce a degree of entropy is the progressive decoupling of social class and party allegiance since the 1970's. If class were the only systematic determinant of the vote, it would all be extremely clear: if, over time, more ABC's and fewer DE's voted Labour, Labour would get the most (least) favourable swings in the seats with the most ABC's (DE's) i.e. the seats where it was previously doing worst (best.) The most obvious objection to this simple story in the British case is that we have seen geographical polarisation of the vote progressing alongside its social decoupling. However, as argued above, the weakening of class as a predictor of the vote appears to dominate the

rising influence of geography; and the regional effect would need to increase by *more* than the class effect decreases in order for their consequences to balance out.

4.2 Parties do best in their own marginals (partisan effect)

We cannot explain this by MPs' personal incumbency effects because we are already controlling for them with our variable 'incumbency score.' (see appendix) But a second possibility is that parties put more time, money and effort into holding their own marginal seats than into capturing marginals from their opponents. As we have seen, Clarke et al. (2003) find that this is indeed the case. But in this case, we would see particularly favourable swings in seats which a party captured from the other side at the previous election (over and above any personal incumbency effect for the MP.) As column (2) of table 9 shows, we have found no such effect. 'First-timer' is a dummy with a value of one for all seats that the current government gained at the previous election. Although its coefficient is positive, it is very small and statistically insignificant. After controlling for personal incumbency, parties seem to get as good a swing in long-standing marginals as in ones which they have just won over.

A third possibility is that the 'chameleon effect' is at work. It is well established that voters take some of their political colouring from their surroundings. Butler and Stokes (1974) chapter 6 and Miller (1977) are among those who provide a variety of evidence for this proposition. It might be down to the influence of friends and acquaintances (McClurg, 2006; Richey, 2008), an unconscious imbibing of the dominant political culture or even a conscious decision to conform. It goes without saying that any such effect will be much weaker in a

marginal constituency which may have recently belonged to the other side and where the vote by definition is fairly evenly split. And again we have to ask whether any favourable swing from this source can live on after the first election where the party fights the seat as sitting tenant. After that, any chameleon effect, while sustaining the share of the vote, will not produce any further swings. It could, however, be that the chameleon effect is slow-acting on some voters, so that a change in the ownership of a seat, if not reversed, is still exerting some effect on the voting two or more elections later.

To sum up, then, the zigzag curve which we unexpectedly found can be explained by a combination of incumbent *party* (not just personal) effects in constituencies and a general entropy effect produced by the decreasingly clearcut relation between social class and party preference. The partisan effect is the more problematic of the two: can we believe that seats which are fairly evenly balanced and also probably change hands from time to time can have an incumbent party effect which is not only fairly strong but which goes on producing favourable *swings* (not just an increased share of the vote) election after election? Clearly more work needs to be done here.

But, whatever the explanation of the zigzag curve, we can go on to elucidate its implications. The relationship we found between successive majorities in a constituency took the form $m_1 = am_0 + e$, where $a<1$ (entropy) and $e>0$ (party incumbency effect.) Now suppose there is a national swing s against Labour For a Labour-held constituency this gives $m_1 = am_0 - 2s + e$. Labour will hold the seat iff $m_0 > \frac{2s - e}{a}$. Assume that they do hold it, and at the next election there is a swing of s back to Labour. Hence:

$m_2 = am_1 + 2s + e = a^2 m_0 + 2(1-a)s + (1+a)e$

The condition for m_2 to exceed m_0 is thus $m_0 < \frac{2s}{1+a} + \frac{e}{1-a}$. And if regular alternating swings were to continue, $m_2 > m_0$ would imply $m_4 > m_2$ and so on.

Assume such swings for a moment, and define a marginal seat as one with a majority of less than *x*. Then, provided $\frac{2s-e}{a} < x < \frac{2s}{1+a} + \frac{e}{1-a}$, the number of marginals will decline through time. Those which start with a majority of less than $\frac{2s-e}{a}$ will stay marginal; their frequent change of ownership will prevent the buildup of incumbency effects. But those with a majority greater than $\frac{2s-e}{a}$ but less than *x* will build up increasing majorities, some of which will come to exceed *x*.

Given our estimates of *a* (0.94) and *e* (0.93), what values of *s* would cause the number of seats with a majority of less than, say, 10% to fall through time? The condition is that $\frac{2s}{0.94} - 0.99 < 10 < \frac{2s}{1.94} + \frac{0.93}{0.06}$, which is satisfied by all $s<5.84$.

Clearly this is all a gross simplification. Elections do not feature uniform alternating swings, and constituencies can move into and out of the marginal category for all kinds of idiosyncratic reasons. However, given that only one post-1950 election has featured a swing larger than 5.84%, the simulation above is perhaps not entirely worthless in demonstrating that incumbency effects have probably been strong enough relative to entropy effects to explain the declining number of marginals.

APPENDIX

MEASURING PERSONAL INCUMBENCY EFFECTS

An important methodological point is how to model the kind of incumbency effects, postulated and confirmed by Steed and Curtice, whereby a sitting incumbent fares better than a newcomer to the constituency. If there *is* a positive incumbency effect, the swing to the government will be amplified in seats where the governing party is fielding an incumbent this time, but was not doing so last time. Let us give this situation an 'incumbency score' of one. If it was the current opposition which fielded an incumbent last time, but is not doing so this time, again the government gets an incumbency score of one for that constituency – they are losing a previously hostile incumbency vote. Where the current incumbent belongs to the governing party *and* is replacing an incumbent of the opposition party, there is a double incumbency effect and the incumbency score is two. Clearly, for each of these positive scores there is a negative counterpart – if, for instance, there was no incumbent at the last election but a current incumbent, who belongs to the opposition party, the governing party gets an incumbency score of minus one. Formally:

TABLE A1

Incumbent at current election

	Current government	Current opposition	Other, or no incumbent
Incumbent at previous election			
Government at current election	0	-2	-1
Opposition party current election	2	0	1
Other, or no	1	-1	0

incumbent			

With incumbency scores calculated in this way, we get the results shown in tables 3 and 4.

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